Planning Community of Practice
Crowne Plaza Hotel
San Antonio, TX
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Comprehensive Systems Approach to Adaptive Management

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Adaptive Management PDT
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ACTIONS for CHANGE

Definition of Adaptive Management (NRC 2004, DOI 2007)

A decision process that promotes **flexible** decision making that can be adjusted **in the face of uncertainties** as outcomes from management actions and other events become better understood.

Careful **monitoring** of these outcomes both advances scientific understanding and assists in the **adjustment of policies and operations** in an **iterative** learning process.

Recognizes the importance of the contribution of **natural variability** to ecological resilience and productivity. It is **not** a **“trial and error”** process, but rather emphasizes “**learning while doing**.” Adaptive management does not represent an end in itself, but is instead a means to more effective decisions and enhanced benefits.

The true measure of adaptive management, and its value to USACE, is in how well it **helps meet environmental, social, and economic goals**, increases scientific knowledge, and **reduces tensions** among **stakeholders**.

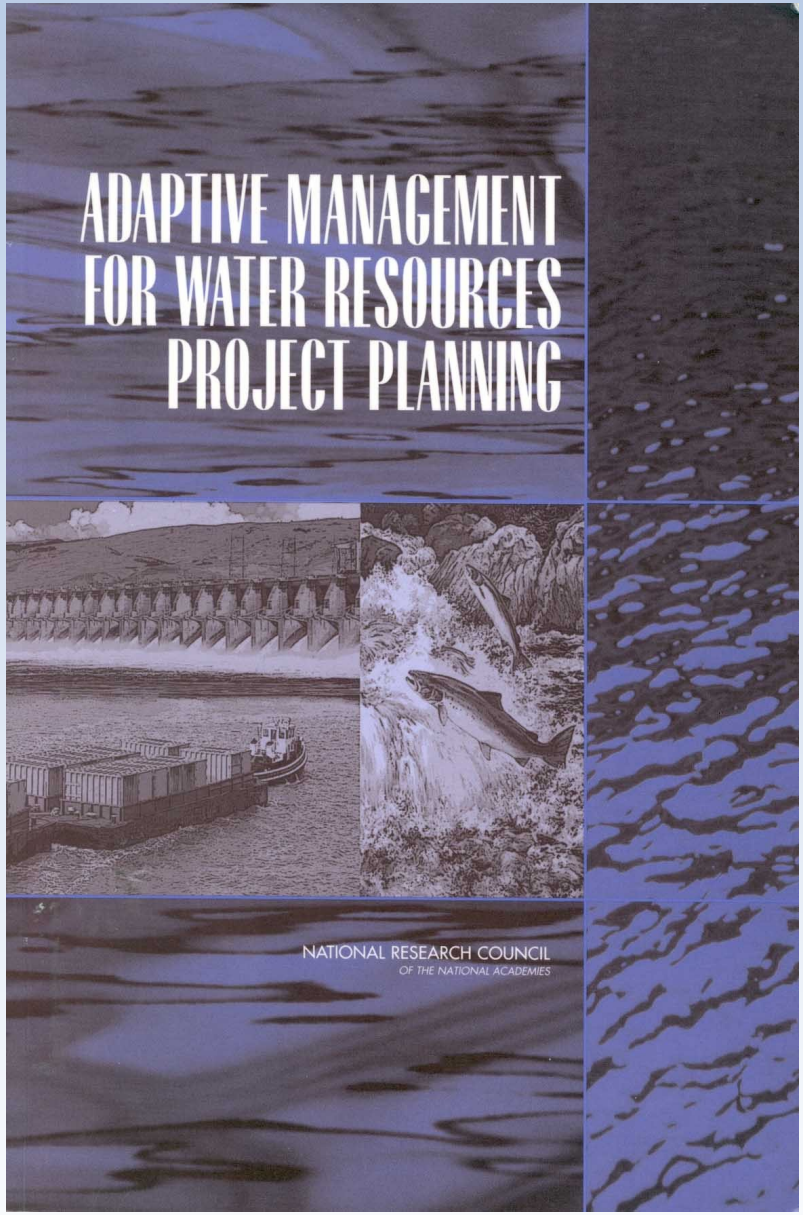
ACTIONS for CHANGE

Objective

- **Develop a framework for adaptive management that can be incorporated into USACE Civil Works projects to allow for flexible decision making in the face of uncertainty.**

- **Use the adaptive management process to strengthen stakeholder relationships and confidence in the USACE process.**

ACTIONS for CHANGE



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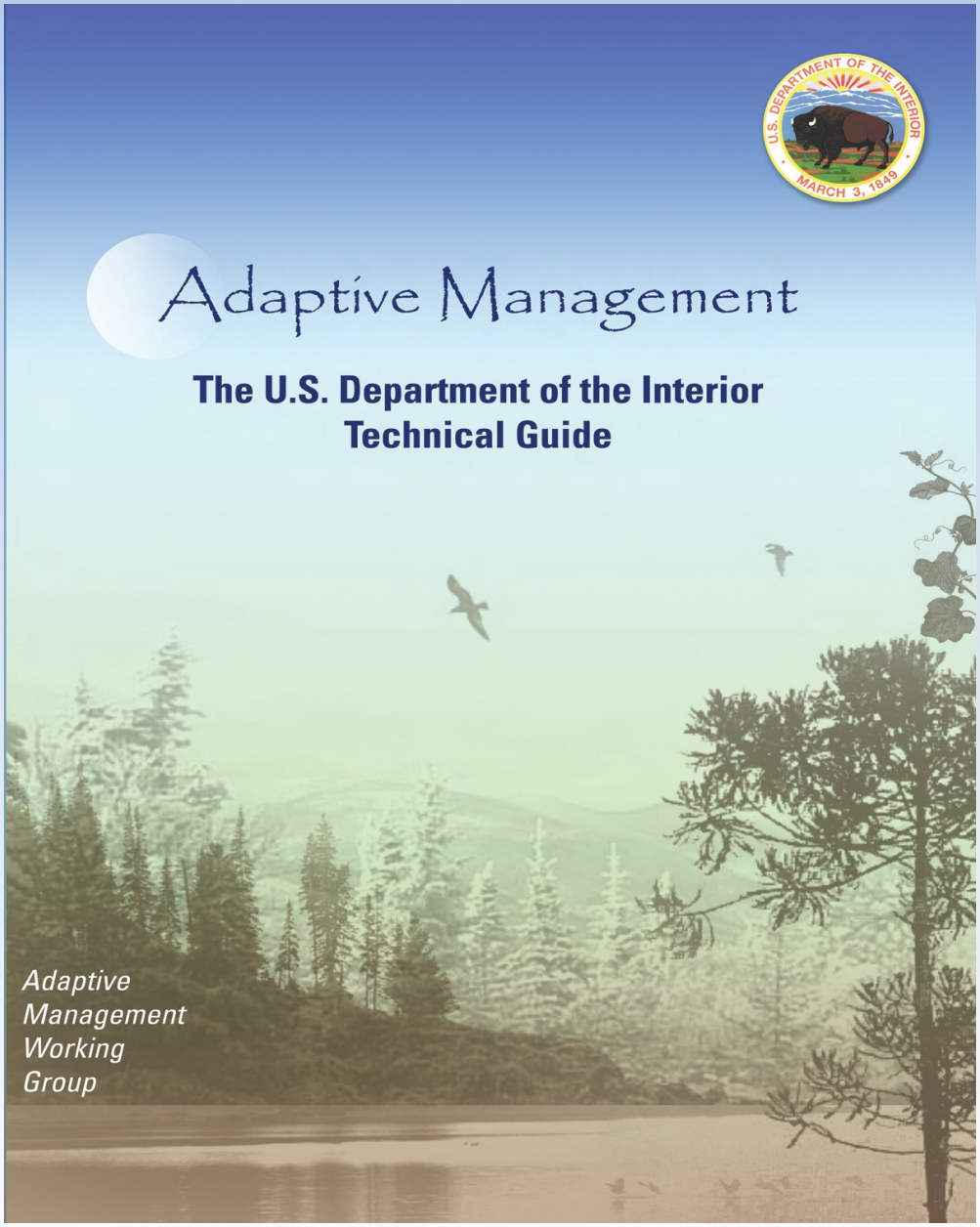

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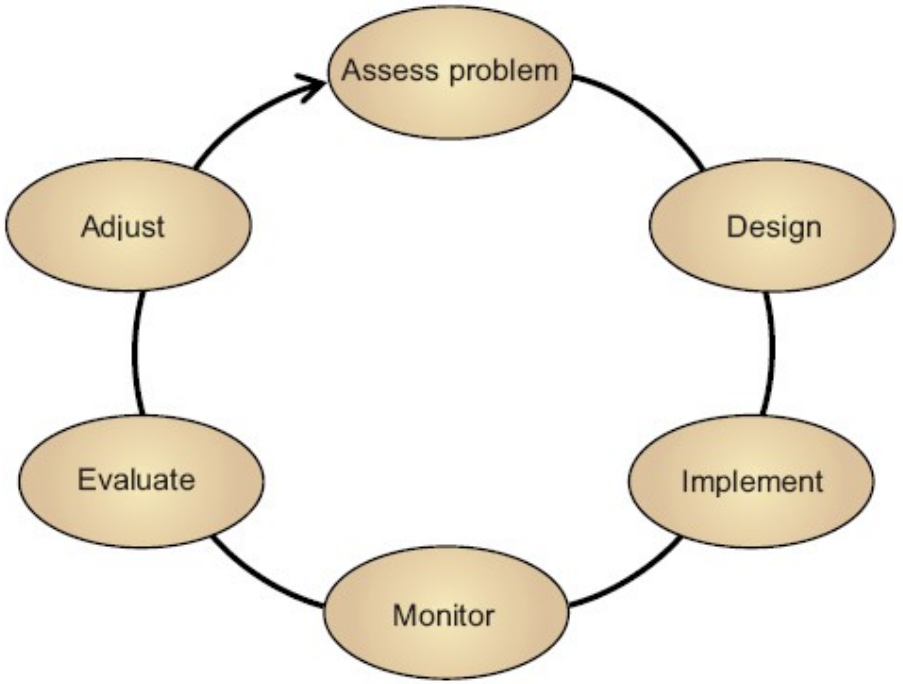
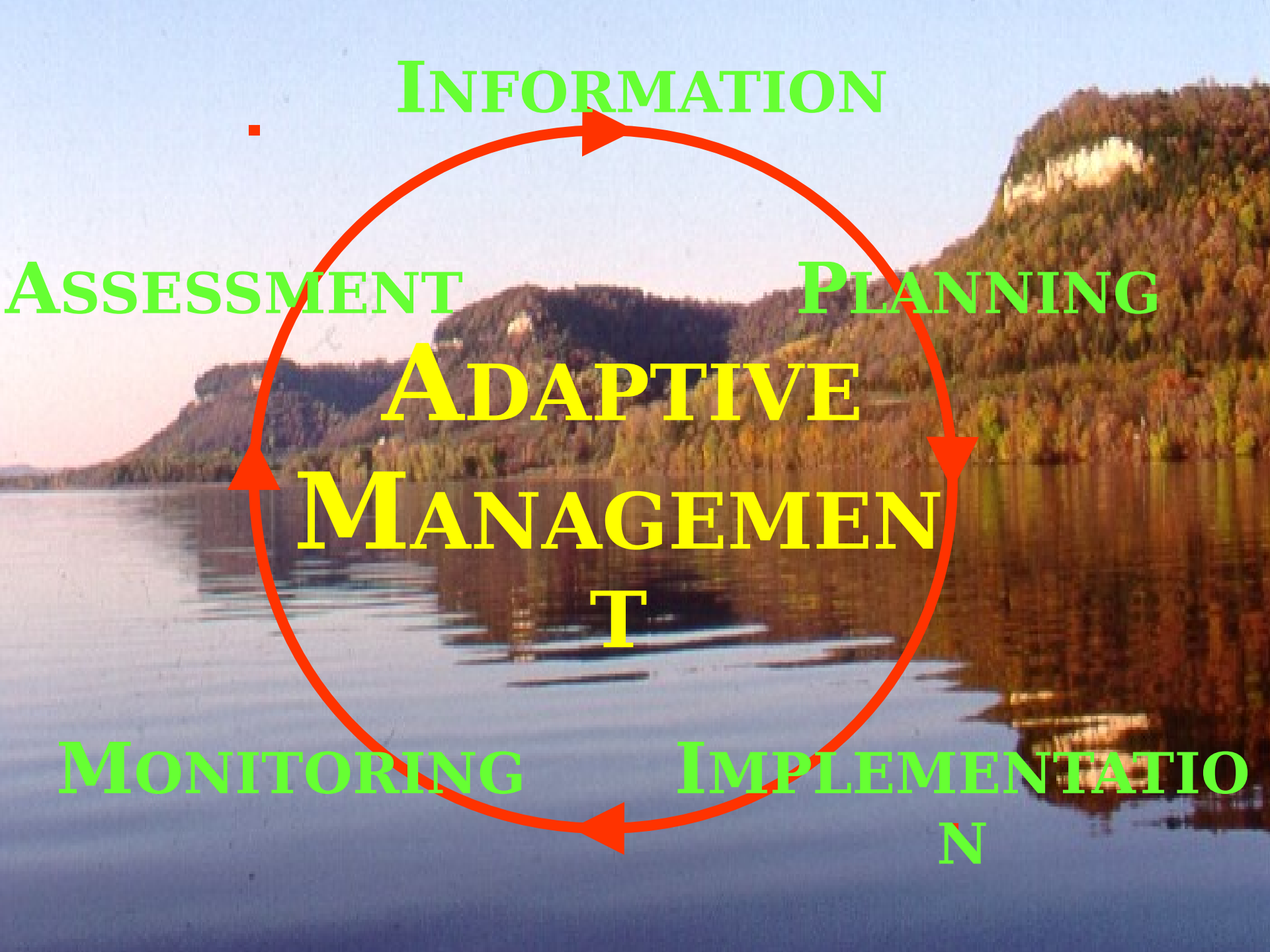
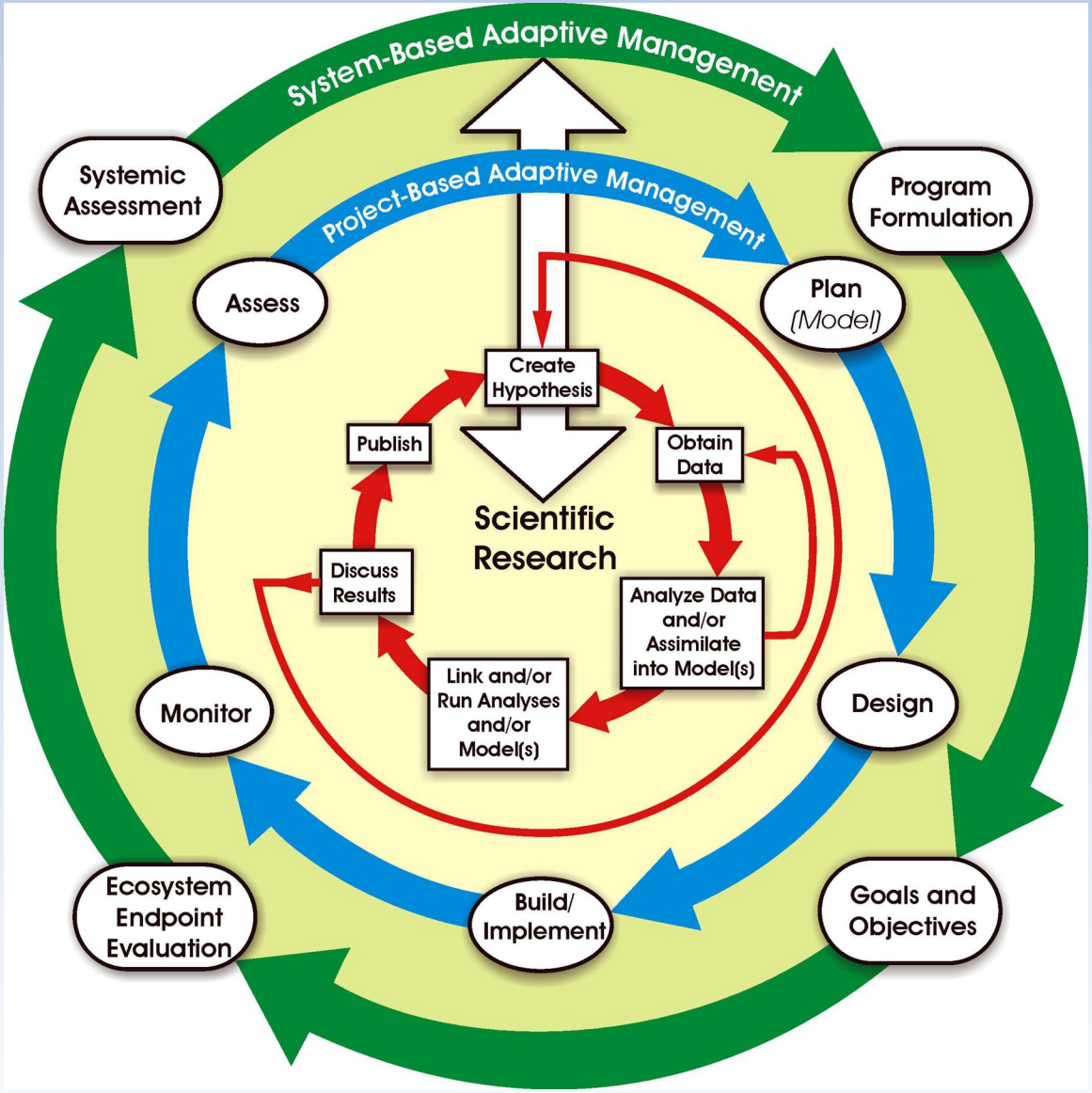
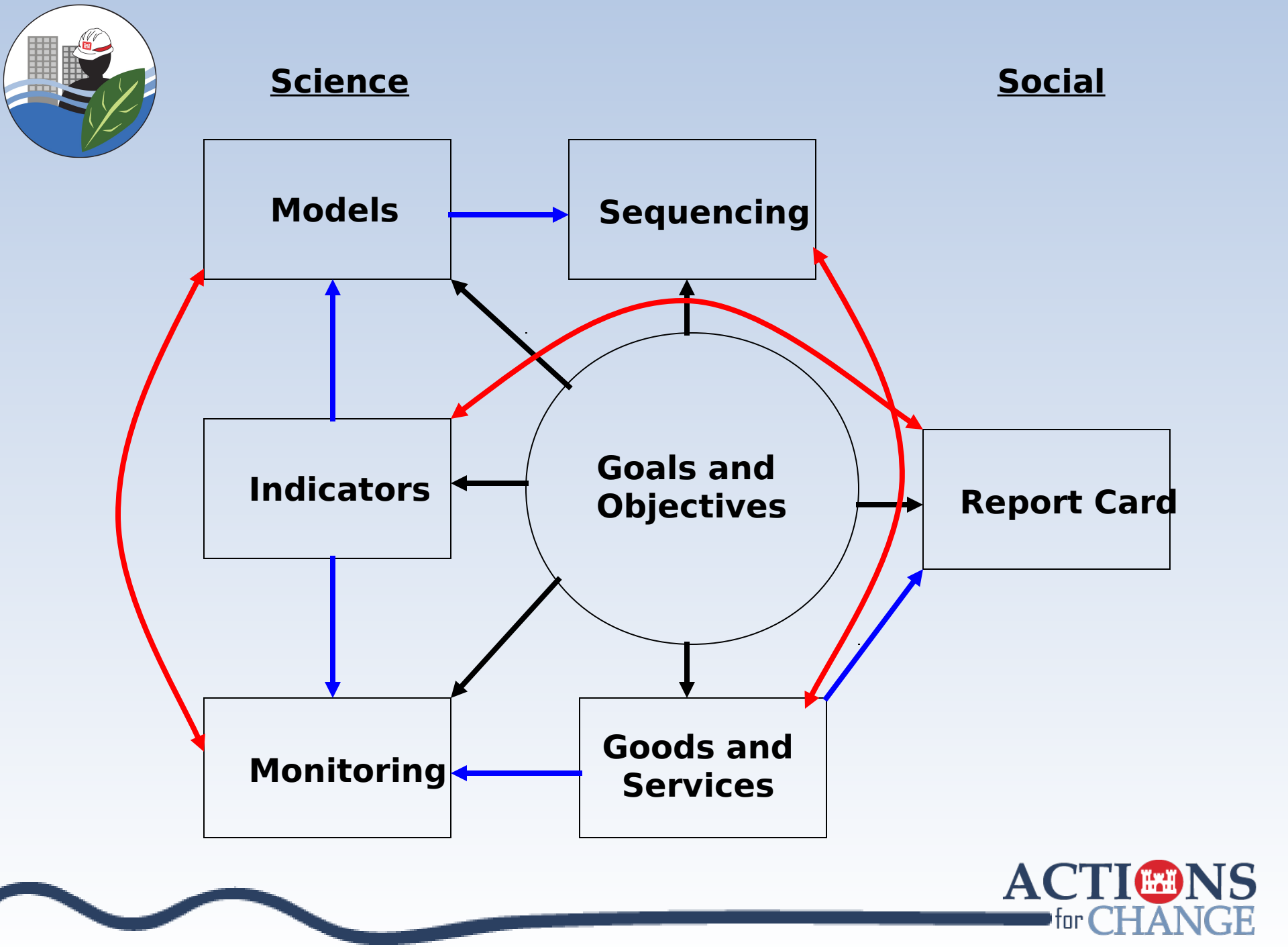


Figure 1.1. Diagram of the adaptive management process.


Information
Planning
Implementation
Monitoring
Assessment
Adaptive Management



ACTIONS for CHANGE


Science
Social
Models
Sequencing
Indicators
Goals and Objectives
Report Card
Monitoring
Goods and Services

Projected Benefits

- **Improved decision making in the face of uncertainty.**
- **Improved communication with stakeholders.**
- **A business process aimed at balancing economic, social, and ecological factors for a sustainable future.**

ACTIONS for CHANGE

Expected Products and Activities

- **Policies, methods, technologies, and tools that support the use of adaptive management, as appropriate, in support of decisions involving complex systems with inherent natural variability and uncertain knowledge.**
- **Modified Program Management Business Process to integrate new policy and procedures into project execution.**
- **Workshops and open dialog with stakeholders, senior leaders, and USACE staff to develop working knowledge of adaptive Management procedures and policies.**
- **Streamlined Post-Authorization Change process to facilitate the use of adaptive management in the development of sustainable projects.**

ACTIONS for CHANGE

Milestones and Tasks

- **Define Adaptive Management pursuant to NRC 2004 and DOI 2007. Prepare draft technical guide with lessons learned and case studies.**
- **Review policies, methods, and technologies that relate to adaptive management. Identify constraints to implementing adaptive management. Develop initial framework for implementation of adaptive management and prepare preliminary draft ETL/EC.**
- **Coordinate with other agencies to consolidate, expand and develop where necessary the required guidance and tools to incorporate adaptive management into decision making on planning, design, construction, operation, maintenance, and dynamic review of projects and systems.**
- **Make recommendations for changes to align with the Actions for Change program goals, especially sustainability and risk informed decision making. Prepare draft ETL/EC.**
- **Investigate and recommend policies to streamline Post-Authorization Change (e.g. 216) process to facilitate adaptive management and the development of sustainable projects.**
- **Infuse adaptive management into practice with stakeholders through workshops, demonstrations, and innovative methods.**
- **Promote use of adaptive management throughout full life-cycle of USACE projects through white papers and updated guidance. Enhance PMBP to apply adaptive management to project/program/system execution.**

ACTIONS for CHANGE

ISSUES OF SCALE
Objective setting and Management at different scales

Upper Mississippi River Basin

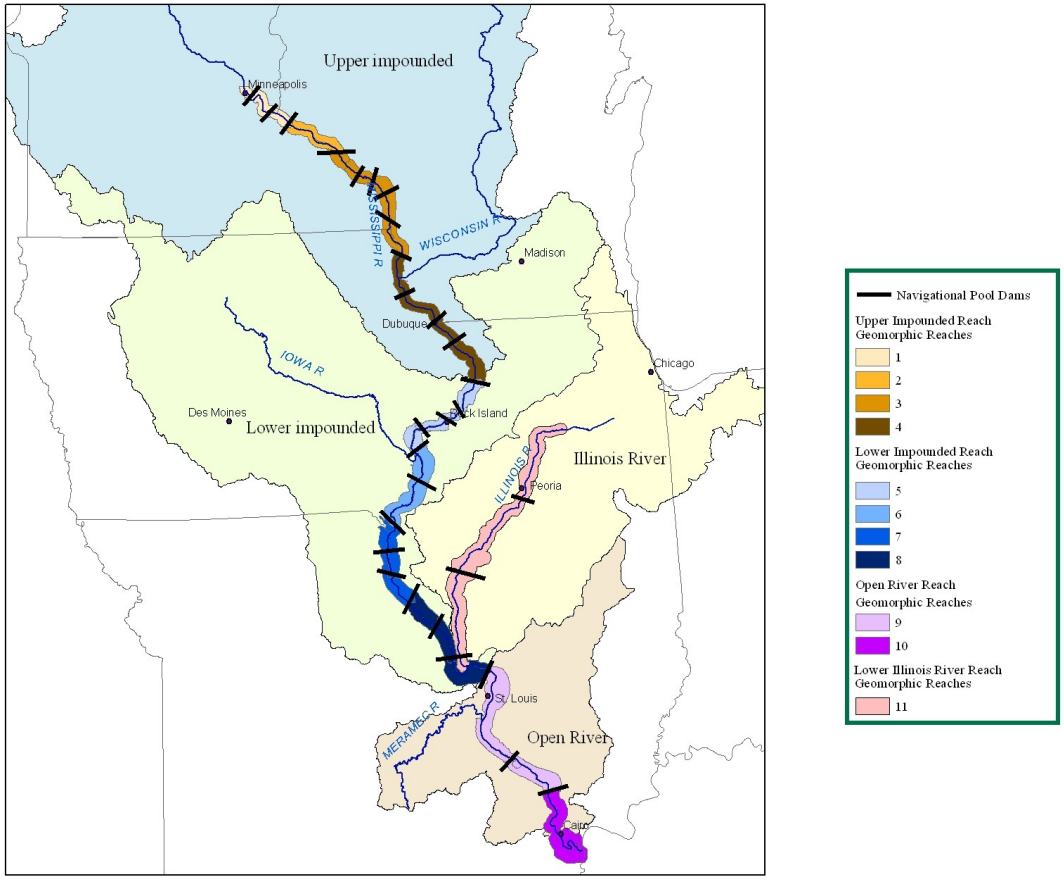
Upper Mississippi River System

Reaches

Geomorphic reaches

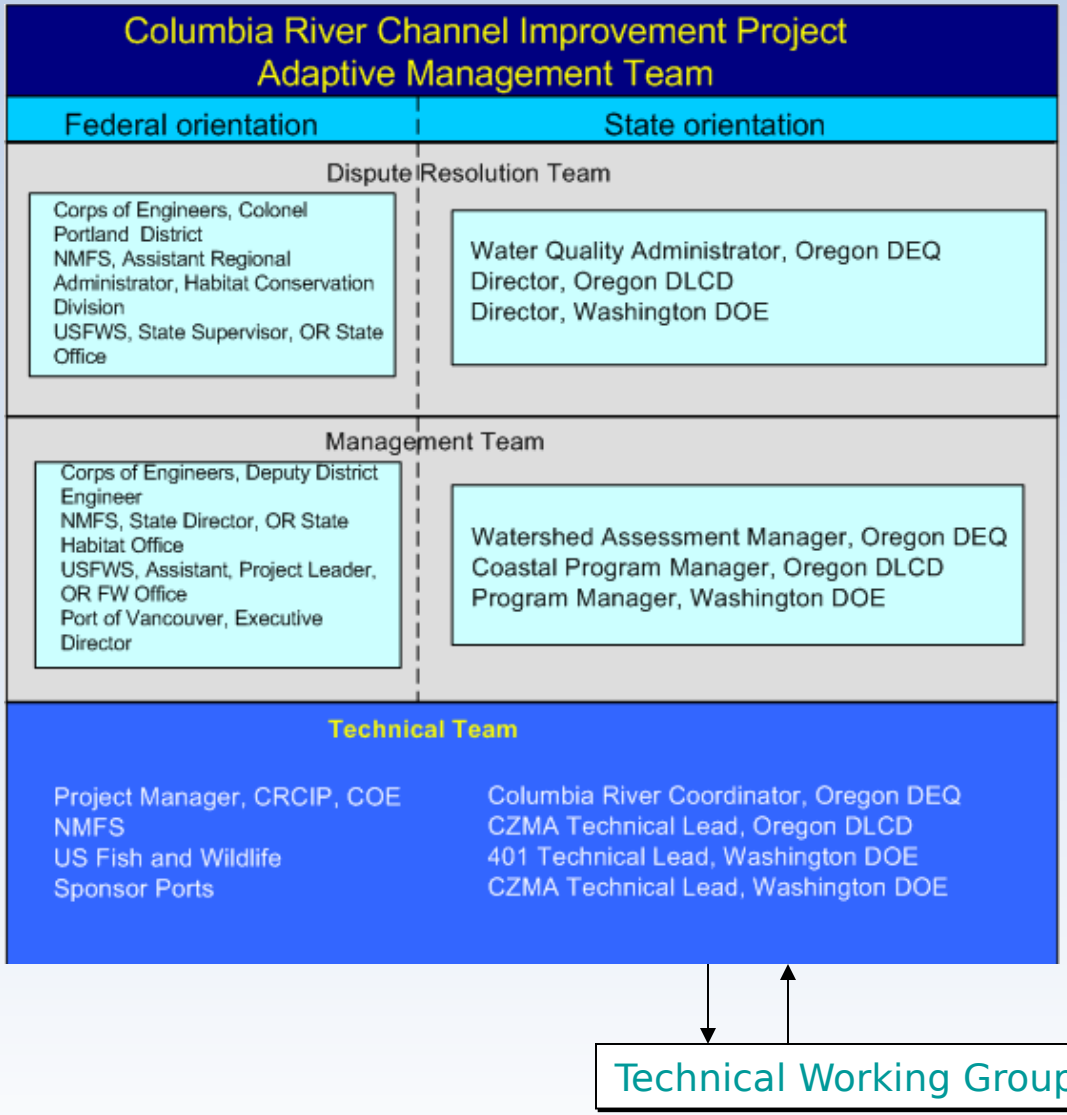
Nav. Pools

Project areas



ACTIONS for CHANGE

ISSUES of ORGANIZATION and REGULATION
Adaptive Management Team…


Columbia River Channel Improvement Project
Adaptive Management Team
Federal orientation
State orientation
Dispute Resolution Team
Corps of Engineers, Colonel Portland District
NMFS, Assistant Regional Administrator, Habitat Conservation Division
USFWS, State Supervisor, OR State Office
Water Quality Administrator, Oregon DEQ
Director, Oregon DLCD
Director, Washington DOE
Management Team
Corps of Engineers, Deputy District Engineer
NMFS, State Director, OR State Habitat Office
USFWS, Assistant, Project Leader, OR FW Office
Port of Vancouver, Executive Director
Watershed Assessment Manager, Oregon DEQ
Coastal Program Manager, Oregon DLCD
Program Manager, Washington DOE
Technical Team
Project Manager, CRCIP, COE
NMFS
US Fish and Wildlife
Sponsor Ports
Columbia River Coordinator, Oregon DEQ
CZMA Technical Lead, Oregon DLCD
401 Technical Lead, Washington DOE
CZMA Technical Lead, Washington DOE
Technical Working Group

Dispute resolution

Management

develop and implement the AEM Plan/Process

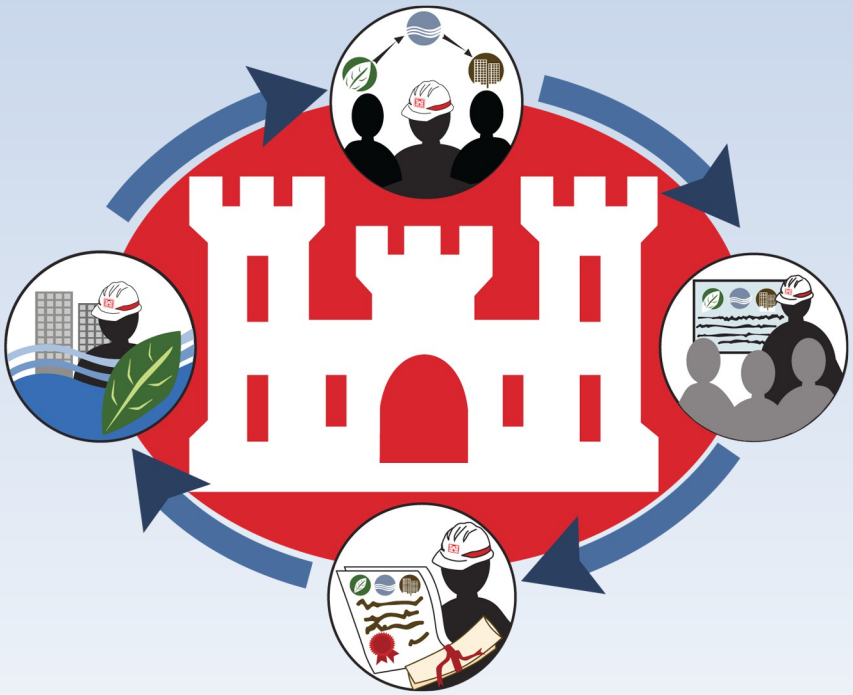
ACTIONS for CHANGE

Perspective

- **Adaptive management is the MOST EFFICIENT manner of decision-making in a high risk and uncertainty decision-making environment. It's not an excuse to take project money away to perform scientific studies. The usual linear, unidirectional decision-making simply is not effective on the long term.**

ACTIONS for CHANGE

Questions?



To learn more about Actions for Change
visit us on the web at
https://maps.crrel.usace.army.mil/AFC/

ACTIONS for CHANGE